

AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-274. Canceled.

Claim 275. (Currently Amended) A method of producing a library comprised of chimerized, [[but]] defined polynucleotide sequences each of which is comprised of a defined number of polynucleotide segments that are assembled in an ordered fashion, the method comprising:

a) generating a plurality of defined polynucleotide segments [[of]]

selected from aligned substrate nucleic acid sequences,

wherein said substrate nucleic acids encode full-length enzymes,

and wherein borders boundaries defining the polynucleotide segments

are selected by aligning the from the aligned substrate nucleic acid

sequences; and

b) reassembling said defined polynucleotide segments in order

thereby producing the library of chimerized, [[but]] defined polynucleotide

sequences, such that said segments are reassembled in an ordered fashion to

produce each chimerized, [[but]] defined polynucleotide sequence

encoding a full-length enzyme, each of which is comprised of a defined

number of polynucleotide segments that are reassembled in an ordered

fashion.